

ABSTRACT

A method of locating an inhibitory/instability sequence or sequences within the coding region of an mRNA and modifying the gene encoding that mRNA to remove these inhibitory/instability sequences by making clustered nucleotide substitutions without altering the coding capacity of the gene is disclosed. Constructs containing these mutated genes and host cells containing these constructs are also disclosed. The method and constructs are exemplified by the mutation of a Human Immunodeficiency Virus-1 Rev-dependent gag gene to a Rev-independent gag gene. Constructs useful in locating inhibitory/instability sequences within either the coding region or the 3' untranslated region of an mRNA are also disclosed. The exemplified constructs of the invention may also be useful in HIV-1 immunotherapy and immunoprophylaxis.